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CANADA.

*Inspection of immigrants at St. John, New Brunswick.*ST. JOHN, NEW BRUNSWICK, *January 19, 1903.*

Assistant Surgeon Billings reports for the week ended January 17, 1903, as follows: Immigrants inspected, 161; detained, 6; passed, 155.

The SURGEON-GENERAL.

CHINA.

Treatment and cure of leprosy in south China by Dr. Adolph Razlag.

[No. 227.]

CANTON, CHINA, *September 4, 1902.*

SIR: In further continuation of my Nos. 196 and 213, concerning the treatment and cure of leprosy in south China, by Dr. Adolph Razlag, an American citizen, I have the honor to report as follows:

The wonderful success attending Dr. Razlag's efforts has attracted considerable attention here among both natives and foreigners, especially amongst the Manchu and Chinese high officials, civil and military, and will also, I have no doubt, be viewed with profound interest by humanitarians everywhere, as well as by men and women versed in medical science. His initial operations began, as I have already related in my previous dispatches, on April 20, 1902, in the leper village, which is situated about 6 miles to the east of Canton.

The results of the first 4 cases have gone far to show that his work of treatment, etc., has passed beyond the stage of what might aptly be called experimentation. For, although the 4 patients have only been four months under treatment, 3 of them have returned to their ordinary avocations—one a native preacher and teacher attached to the American Presbyterian mission at Kuk Fau, one a coolie carrying heavy loads of matting, rice, etc., on his shoulders from almost daybreak until darkness sets in, between 8 and 9 o'clock at night, and one a boy of 16 years, who has made a practical recovery, while the fourth one is still under treatment, his case being undoubtedly a desperate one when first taken in hand, its features predicting but little hope of a successful issue. A second group of patients, 13 in number, all of them in advanced stages of this loathsome and repulsive disease, is now under treatment in the new house immediately adjoining the leper village or settlement, which, through my efforts, H. E. Tao Mu, viceroy of the Two Kwangs, has courteously placed at the disposal of Dr. Razlag for his patients. The condition and treatment of each leper are detailed in the following report, prepared at my instance by Dr. Razlag, who, by the way, defrays the entire expenses of food, clothing, medicines, etc., for the unfortunates, whose condition he is alleviating and to whose hopeless and despairing hearts he has brought rays of comfort and gladful hope. In his report he presents a plausible and commendable scheme for the establishment of an island sanitarium, where the lepers of both sexes and all ages can be segregated and successfully treated. I feel it to be my duty to suffering humanity to commend his scheme (or plan) to the serious consideration of the Department and of the scientific world. As I have personally witnessed the progress of his leprous patients from the nauseating and repellent stages of foul ulceration, etc., to comparative recovery, I have necessarily a strong belief in the efficacy of his methods

of treatment, and, as I have had considerable personal experience and some actual practical knowledge of these and kindred subjects, I regard with favor and ask your courteous permission to recommend the scheme, embracing the proposed island sanitarium and its methods of government and treatment.

The following is Dr. Razlag's report :

In the past few years various circumstances and opportunities gave me the impulse to start with interest in the treatment of leprosy, and after some success I met difficulties that forced me to go to China to continue there my study and experiments, more or less undisturbed. I found Canton to be the best and largest field, as not far away from this city there is a leper village named Fat Fung Yun, with 982 leper inhabitants, and after having secured one large apartment by the courtesy of the American Medical Missionary Society, in their hospital at Canton, I took in 3 men selected from the village. Of these, 2 are now in a condition to support themselves, the third will have to stay under treatment for about two months more, as he was the worst case in the leper village and the healing of his wounds requires a longer period. Why the treatment of wounds necessitates a slow course will be clearly explained under the head of treatment. After about one month's work in the hospital I was anxious to get a place outside of the city, and through the efforts of the United States consul, Hon. Robert M. McWade, H. E., the Viceroy Tao Mu gave me the permission to use the newly erected leper asylum, near the "lepratown" for my further work. This building consists of 70 (rooms) wards, with accommodation for about 200 lepers. In the course of time, more patients were admitted, each of them with a different history and distinct development of the disease, and now I have, at the present time, 11 men and 2 women under my treatment there.

This new building is erected on elevated ground, but is without any windows, and the nearest well from which to get water for domestic and other purposes is a distance of 1 mile away. As the bathing is indispensable in the treatment of leprosy, I have to keep one man to carry the water all day long.

Lepratown, as well as the asylum, is nearly 5 miles away from the city and close to the main road to the interior.

The lepers belonging to the leper village are allowed to go to Canton to beg and look for their meals, and we meet lepers going in and out of that city continually, a condition that ought to be restricted, even if nothing else in regard to isolation should be done. These lepers wander over the same road and paths as other people who come and go to and from Canton, bringing fruits, vegetables, and other merchandise. My observations show that daily at least 18,000 people pass barefooted over the same paths as the lepers with their ulcerated feet and limbs (continually discharging) along this road from the leper town to the city. On both sides are vegetable gardens and a few small lakes. These lakes are maintained so that during the dry season the gardens can be sprinkled with the reserved water. The gardeners collect the night soil or excrementitious matter daily from the leper town and also from the city and throw it into these lakes, the polluted water from which gives, in their opinion, more nourishment to the vegetables when it is plentifully sprinkled on them. Not alone that, but almost all men and many of the women going to the city, as well as the lepers, wash their feet and legs and sometimes their bodies also in these lakes. Besides, I can also state positively, from my own observation, that all the vegetables brought in by this road are washed in this water before they enter the town, where they are sold to natives. Dogs, cows, oxen, buffaloes, pigs, chickens, and ducks are all day long in and around the leper town. They eat the grass that grows in the lepers' cemetery and drink the water out of these lakes, the buffaloes and ducks taking their baths there also. The leper town itself is without any official or other supervision, and is a place of horror to our eyes. No foreign or native doctor lives within miles of it or goes there at all. These few remarks will show the existing conditions in this place and of 37 other leper villages in south China. Every town in China has lepers in an average percentage of 1 in 200, some villages 1 in 100, and a few with 1 in 30. Canton itself has 20,000 lepers. The same conditions, and in some respects worse, will be found in Siam.

The Philippines are in some ways better, as the leprosy there is not spread all over, but Visayas and Moros give such strong evidence of it as to indicate the advisability of introducing strict isolation there as soon as practicable. In this direction something has already been done.

I know the Philippines very well, and believe that the reports of the number of lepers there are not correct. In the last report, the province of Laguna shows 1 leper, but there are surely about 100 there.

The newly selected island for lepers in the Philippines will probably suit in a way, but I wish to say that too much money should not be wasted on fine buildings, etc.

Molokai, in the Hawaiian Islands, is largely improved by the American Government, but practically it will need very many changes to make it well adapted for this special purpose.

Herewith I submit my ideas, propositions, and suggestions. Everyone knowing the history of leprosy will, unconditionally, agree that to stop the development of this dreadful disease, it is necessary to get the unrestricted and unlimited control over the afflicted, and the only way to aid materially in bringing about successful results is complete isolation enforced by proper laws. The lepers ought to be transferred to an island.

Such an island must be in a tropical climate, securing a mild warm temperature, so that the treatment would not be interrupted by rough or cold weather and other inconveniences. The island should be surrounded by fresh-water rivers for bathing and all other purposes. Wells would not suit, as it would cost an enormous sum to build enough wells, for the patients need water all the time, and, as they can not live close together, wells would have to be constructed at every 300 or 400 yards distance. A vast number of the lepers are weak and can not even walk or carry water any distance, and, in addition, we must restrict in every possible way the number of servants or attendants.

Even having wells, it would be almost impossible to make arrangements for a continuous regular supply of good water, so it is unquestionable that the one island selected must have such a natural water supply as fresh-water rivers.

The building ought to be erected close to the river (anyhow so that the river in the rainy season can not damage their residences, etc.), and here is another great advantage over wells and a necessity for flowing rivers.

The use of the water must be guided by rules or regulations. As the lepers have no other work except to keep their bodies, houses, and yards clean, I would suggest the following :

Every building to have a box or barrel, where all the refuse matter ought to be put, and at night these barrels should be emptied into the river. In the course of the night, all this dirt will be carried to the sea, so in the morning the river is clean again. All refuse can not be carried by the running water, but the main part has gone and all of it that can be burned should be destroyed in that way. No doubt, such dirt or refuse matter as human excrement, soiled bandages, etc., will be carried away by the flow of the river overnight and will not infect the water which is to be used by the lepers the next day. In the daytime the river is for baths and other washings, and no dirt or refuse should then be thrown into it.

The cleaner the island the more pleasant the aspect and the better the moral and physical conditions. Thus, the generally neglected lepers will have some congenial and easy occupation, and in a short time will begin to realize and know the difference between cleanliness and dirt, which they in fact are not now able to distinguish. I do not favor the suggestion of building boats to carry the dirt down the river to the sea, as the main thing is to keep the island forever clean and free from all dirt whatever. The boats would be also a source of contamination.

Wells would be of but little use, as he who knows the poor, neglected leper is convinced that they have no idea how to keep themselves and their surroundings clean without at the same time making their premises dirty. The natural and continual flow of the river is an advantage that could not be replaced by any other artificial means, and it is the most economical way to give necessary cleanliness that brings comfort and health to the patient. Just suppose that the flow of the river would have but a force of 3 miles an hour, how easy could all refuse matter reach the sea overnight, and the next day we would have the clean river water for all our purposes and uses. Another thing, having such rivers, the costly building of canals, etc., would not be necessary.

Along the banks of river or rivers the houses for the lepers must be built, and also along the seashores.

Some patients will have to use sea-water baths exclusively, and so, as well along the rivers as along the seashores, their houses must be erected. Behind these houses vegetable gardens and fruit trees of all kinds can be cultivated. Rice and other grain will not be planted on the island, as generally the lepers are not strong enough for such work, and I would advise against the use and importation to the island of other workmen.

The less men and animals on the island the better. About the keeping of animals on such an island I would give the following suggestions :

In the houses of the employees, as well as of the lepers, no animals of any description should be allowed, and the keeping of dogs, cats, monkeys, or birds should be strictly forbidden. Cats and dogs are of no use on such an island, as all the buildings will be erected in a way that will keep off rats, mice, etc.

Certain places will be set aside, not far from the kitchen, where ducks, chickens, pigs, and other animals used for food will be confined.

Kitchens, storerooms, and other administration buildings will be erected on the most convenient spots. About bathing tubs and other domestic comforts for the lepers, such arrangements can be made just as circumstances require.

All buildings to be erected on such island must be built in the plainest possible way, with no decorations whatever and with everything just suited for its special purpose and no more. They must be so built that we can reach every corner and keep every place clean with ease.

Chairs, tables, beds, dishes, etc., should also be as plain as possible, and everybody should be provided with such necessities, all made on one pattern or style. No exception should be made either to the physicians or the patients, for as soon as exceptions are allowed to one person all rules lose their power.

In regard to the doctors, nurses, and other help, it will be of great importance to make it a rule that everybody is obliged to do his full duty. The existence of too many bosses is folly; there must be only one capable head or chief.

In starting such a great and humane work it is really necessary to select the doctors, nurses, and other help from among people of character who take a real interest in the relief of the suffering and who do not work only for the wages or salary given them. They should be benevolent and good-hearted people, who voluntarily and unquestioningly devote themselves to this work. It is preferable to employ only single people, if at all possible, people who will devote their time exclusively to the work designated for them.

No employee, doctor, nurse, or other help should be allowed to take his wife or children along, for obvious reasons. Schools should be also erected, and also a good surgical, bacteriological, and pharmaceutical outfit introduced.

About religion, I wish to say that my opinion is to avoid all troubles in this line. To teach honestly the existence of the Almighty, the absurdity and repugnance of sins, and not very much more.

The head of all affairs on the island must be a doctor, a man well experienced, strict in his orders and in their enforcement, but of mild character.

Every employee must know his duty and perform it, and the principal recommendation at the time of his application should be his actual ability. Adventurers are of no use at all.

The circulation of money should on such an island be restricted as much as possible, and the government should provide the inhabitants with everything just as conditions and circumstances require. With such restrictions a good many troubles can be avoided. The patients must be treated with the utmost possible kindness, consistent with the regulations. No interference should be exercised with their individual freedom of action as long as it does not conflict with the physician's instructions. A good many reasons exist for the separation of men and women as much as possible. All patients should be dressed and fed in the same way and all the outfit of kitchen, bedroom, etc., uniform in kind and style.

Doctors and nurses must treat their patients just as the medical director orders, and they are not allowed to pursue a different method of treatment unless it has been approved by the medical director and a board of medical advisers. This point must be enforced by a special law; if not it may cause needless and dangerous controversies, as well as a conflict of authority.

Every person employed either as doctor or as nurse, or in any other capacity whilst recognized as being an able man in his line of duty, must follow strictly the treatment directed by his superior officer.

A board of medical advisers will be selected, and orders and directions given out by this board must be carried out in the proper way and exactly as they indicate.

Employees inclined to quarrel and make trouble will be dismissed promptly. Such people are generally useless and frequently dangerous. All employees must be strong and healthy and not afraid of work.

The success of the administration will depend very much on the conditions of the island and the observance of its wholesome rules. Anyhow, having the right man in the right place as a medical director is the most important point. Whilst successful results can be realized on one island, it is my belief that better ones could be achieved on a group of two or three islands close together. Men and women must be isolated, and to effect a thorough isolation without being obliged to employ guards, it is necessary to separate them in a way that they can not reach each other, and the sea would be the best barrier.

If the islands are small the lepers who get well should have another place wherein to live until a knowledge of their complete cure will permit of their transfer elsewhere. But this is not so urgent as the principle of separation of the sexes, which is almost

imperative, as our intention is to fight in every way not only against the spread and development of this dreadful disease, but also to check entirely the possible existence of leper descendants. If the possibility of descendants is effectually guarded against we would expect after ten years' work on our island sanatoria that there will be left but few sufferers, and the cured ones will enjoy their lives until the natural end.

It is a remarkable fact that the mortality among lepers has no higher percentage than among patients afflicted with other tropical diseases. Typhoid, pneumonia, smallpox, cholera, plague, dysentery, and the many kinds of pernicious fevers and anæmia are almost unknown to the lepers, and my opinion is that the quite lazy life which they live prevents and protects them from such diseases.

The kind of material to be used for the buildings depends entirely on the climate and other conditions on the island, and it will be the duty of the director, a well-experienced physician, to take all possible advantages that the natural conditions and position of the island offers. One large island will be good enough for the lepers of any country except China, Siam, and India, as these 3 countries together have about 500,000 lepers more or less.

It is urgent that some government shall begin with this work at an early day. After it has produced excellent results other governments will follow its laudable example.

The conditions in Siam and China will some day give rise to a call for an international congress for settling this important matter, and perhaps it may be precipitated by the execution of the current projects of advancing civilization and business and railroad development.

Before starting such a work it will be necessary to have elected a leper commission consisting of 1 leper expert, 1 expert architect with 2 good designers, 2 doctors with 3 special clerks that are excellent typewriters and stenographers together. All these gentlemen must be of excellent character, trustworthy, industrious, strong, healthy, and sober.

The commission counts 10 men together, as it is advisable to have also 1 trustworthy delegate representative of the government included. Servants are not necessary to take along.

As this work requires a skillful elaboration of all conditions, plans, circumstances, etc., the commission must consist of real experts, each of them in his particular line.

It is necessary that all the work done on this island should be conveniently arranged so that for the future the utmost possible economy in every way could be exercised.

The men in the hot season should wear simply short pants without jacket. The women, pants and jacket made of one piece, so that they may be continually exposed to the fresh air. In the cold or rainy season only heavier cloth should be necessary.

Their shoes should be made of only wooden soles with a strip of soft leather in which to insert the foot. Generally the lepers have all kinds of sores on their feet and a good many are not able to wear even this kind of sole.

With this I hope to have sufficiently explained my intentions and suggestion, and declare, at the same time, myself to be prepared for any work in this line.

TREATMENT.

First of all, the baths are of great importance; I use cold or warm baths of fresh water; also seawater baths, and medicated baths, with iodium, acid. tannicum, potassii permang., liq. calcei sulph., just as the condition of the patient requires.

As sudorific, generally jaborandi, or simply strong coffee or tea. Wounds: Chloride or sulphate of zinc, peroxidum hydrog., ichthyol chrisarobinum, arsenic, acid. tannicum, tr. ferri chlorid., iodium, ol. gynocardia odor., zinci oxid. creosot, croton oil, acid salicyl., tr. iodi, soziodol, sodii, zinci and hydrargyri, potassii permang. strychnin, tar, etc. Dressing with plain absorbent cotton, sometimes with xeroform powder, but never iodoform. It is necessary in the treatment of wounds to make some combination of the above-mentioned drugs, especially in the use of ointments, for which purpose I generally prefer lanolin, tar or glycerin. For the massage and friction of anæsthetic skin, croton oil, strychnin sulph. chaulmoogra oil, in combination with ol. olive, and sometimes pure mucuna pruriens. The œdema can be well reduced by leeches, and I strongly recommend the use of these to a large extent; but great care must be taken how and where to apply them. Internally, liq. pot. arsenitis, or arsenic pills in combination with strychnin and ichthyol; sodii salicyl., ol. jecoris aselli, guayacol, creosot and sometimes airoil seem to produce more good effects than any other drug. I am well acquainted with the use of all the other drugs, as oils, ointments, and liquids used externally or internally, but finally came to the conclusion to keep on the above-mentioned treatment.

Care must be taken that the wounds heal slowly, as a quick closing of ulcers, etc., produces generally again the appearance of nodula as well as œdemata.

The patients must expose themselves as much as possible to the air and be dressed only as much as will cover the body. It will be necessary to adopt in the beginning of the treatment, exclusively, my method, and nobody should be allowed to try any other treatment on the patients.

It is necessary that every doctor shall get acquainted with this method of treatment if he attempts to treat lepers. It is also of great advantage to teach the improved lepers the treatment of wounds and bandaging, as they will thus, by helping the doctor, save a good deal of work. We must remember that no nation or race can be regarded as immune, and, apart from all theories, it is a fact that for everybody infection is dangerous.

Hereditary leprosy counts no more than about one-eighth of the lepers: all the rest is a subjectively contracted disease. In the leper village Fat Fung Yun are 982 lepers, and of these there are only 106 cases of hereditary origin. A hereditary predisposition does not exist, as it is a clear fact that to such an infection a hereditary disposition is an empty theory and nonsense. In spite of what so many authors are writing about it, it is true that predisposition has a good deal to do with every kind of contagion or infection, but in this disease a hereditary predisposition is excluded.

I incline strongly to a belief in a kind of "predisposition" where the skin and system are more or less susceptible or more sensible to surrounding infectious matter.

It is necessary that many other drugs not mentioned here will have to be included in the treatment of leper patients, but at the outset we depend on medicines of proved curative properties.

The strength and applications of the various kind of drugs and remedies vary according to the symptoms and conditions present, and so an exact curative plan must be introduced and taught *ad personam* by practical experience.

At first our duty is to isolate the lepers, then to stop the development of the disease by healing up all sores, ulcers, and other wounds, then to reduce all nodula, maculae, oedema, and then to relieve the patient of all pains, and at the end to commence with an effective cure to clean out the system as far as possible.

The average time of a successful treatment is at least one year, having everything at hand and under favorable conditions. Even having succeeded in a good many cases, a positive and radical cure should not be spoken of. What is of more importance in regard to our plans is the extermination of this spreading disease. When starting on that line we should try to avoid and preclude the infection of others, and the best way to do so lies in the concentration of all lepers on a separate island, where every effort will not alone be made to relieve them of all suffering and to restore their health, but to stop also the possibility of further generations of lepers. The use of such an island should be given to them for their lifetime, and no returning home should be allowed. To deprive such people of the right of marriage or of sexual connection is nothing but an insignificant restriction.

Taking into consideration the great consequences of marriage and the costly efforts of isolation, a restriction in this way is in comparison almost nothing. With such an isolating plan every year the laws become more strictly enforced, and in the course of but ten years there will be but few uncured cases left on the leper island; and there also by prohibiting marriage, after ten years more the leper islands will be almost empty of inhabitants.

The main work will be in the course of the first five years, and later on the survivors and other improved cases will get used to attending to themselves, to helping each other, and to do a good deal of other work that in the beginning will have to be done by our employed assistants.

As I have been working on the treatment of leprosy for many years, with deep interest and considerable patience, I have acquired a large experience in the various stages of the disease, and for the sake of humanity I am prepared at any moment to accept the commission to work out and finish this project in the most practical and economical way in the Hawaiian Islands, Philippine Islands, India, Japan, China, Siam, or any other place.

Without the aid of a government, I will have to abandon entirely this expensive but important work.

PATIENTS UNDER TREATMENT.

Patient No. 1. Sun Tszi Lung, born in Kowloon twenty-seven years ago; married nine years ago, but on account of his disease separated from his wife and three years ago married a leper woman. First wife and her son show no sign of infection. Second wife has no children. Mother still living, perfectly healthy; father died of consumption.

At the age of 17 years anaesthesia of the skin of right leg; one year later paralytic-like condition of this leg; three months later whitish maculae on both cheeks up to the

eyes. After two years, face, fingers, ears, nose, and left leg œdematous. All over the back and chest blue-black maculae with elevation of the skin. Bottom of left foot (sole) suppurating corns. Both lower extremities and elbows covered with wounds, continually discharging a watery, yellowish matter. Growing of the nails of the toes (right foot) stopped. First sign for *L. mutilans*. He has been living in the leper village for six years. My treatment has been pursued for three months and twenty-eight days.

Present condition: Paralysis of left leg and anaesthesia of the skin fairly relieved by massage, etc. Suppurating corns and all wounds healed up. Slight œdema of the ears still existing. Œdema of face, fingers, and left leg disappeared entirely. Patient otherwise in good health.

Patient No. 2. Taw (Chau) Hay, born in Ko You, 23 years old, single. At the age of 15 years there commenced on his left arm anaesthesia of the skin, with reddish maculae, without elevation of the skin. Four years later, nodular œdema of face and ears (leonin aspect); two years later, left arm and both feet suppurating all over. Paralytic-like walk of both legs. Rheumatic pains.

Father died of a large abscess of the neck; mother healthy and still alive.

Patient has been living in the leper village for three years. My treatment three months and twenty-eight days.

Present condition: Paralysis and anaesthesia disappeared almost entirely by massage treatment, etc. All wounds healed up. Nodular œdema of face and ears relieved, leaving but a slight elevation of the skin. Patient otherwise in good health.

Patient No. 3. Lee Tsang, born in Canton twenty-seven ago, single. At the age of 15, copper-colored spots on both cheeks; two years later, anaesthesia of the skin almost all over the body; two years after that nodular œdema on entire face, ears, and arms, leonin aspect. One year afterwards a reddish skin eruption (*exanthema rubra*) all over the body with itch and rheumatic pain; three years later extensive ulceration involving the entire surface of legs and feet, daily discharging 6 to 8 ounces of thin acrid matter, almost destroying all the skin there; loss of 7 nails of the toes and suppurating corns, just beginning to lose the phalanges. Complete aphasia, and not able to stand or walk. The patient I received in a precarious condition, and he was one of the worst cases in the leper village.

His father died of a sore foot, caused by a fall, and his mother is still living and healthy. He has been living in the leper village for ten years. My treatment, three months and twenty-eight days.

Present condition: Exanthema, anaesthesia, rheumatic pain, and all œdemata disappeared, suppurating corns and all the wounds show a healthy cicatrization. On the legs, 2 spots keeping still open, as it is not advisable to close the skin all over too quick. It will take at least two months more before healing up all openings. Aphasia shows but little improvement, but patient is able to walk. Patient is now in good health and able to walk around without any aid.

Patient No. 4. Sieng Young, 16 years old, single, born at Tsang Ging. At the age of 11 years perfectly black macula with anaesthesia on the face, arms, body, and legs.

Mouth, nostrils, and conjunctiva inflamed and perfectly red. Eyes not able to keep open. Ears beginning to swell. Nails of the toes stopped growing. Alarming condition, as such cases infect all mucus membranes and destroy the body very quickly, giving but little chance to fight successfully the arising symptoms, as all affected parts are continually in an inflammatory condition. Mother died of fever; father blind for sixteen years. He was living with his relatives when attacked.

Present condition: Anaesthesia and black macula somewhat better. Inflammation of the mucous membranes fairly reduced. Eyes easily kept open. Swelling of the ears slowly disappearing. Patient otherwise in good health.

Patient No. 6. Kwang Hao, 25 years old, born in Ping Yun, wife of Cheong Fat. At the age of 16, red spots with suppurating corns on hands and feet; lost 3 toes; feet very much swollen with continual discharges of sticky pus mixed with blood; can hardly walk; very weak; body clean without macula and on the face almost invisible light-red macula. No expression of a leper patient. Contraction of fingers and toes far gone. This kind of leprosy, named *L. mutilans*, very seldom affects face or body in any way. Parents healthy. Patient has no children. Treatment, forty-one days.

Present condition: All wounds are closed and the loss of other toes or fingers stopped; swelling of feet disappeared entirely; no anaesthesia; macula on the face slight; patient improving in health.

Patient No. 7. Cheong Fat, 47 years of age, born in Sen On. At the age of 25, whilst a laborer in Queensland, anaesthesia of the skin on lower extremities and feet; intense rheumatic pains all over body and limbs; three years later feet covered with ulcers, healing somewhat by use of hot bath. After a few months arms covered with ulcers and at the age of 40 years all mucous membranes inflamed. Conjunctivitis, swelling of the ears, and large red spots on the face, fingers beginning to lose phalanges.

In this state he left Queensland and reached the leper village, living there for the past seven years. Parents clean. Treatment forty-one days.

Present condition. All spots and wounds healed up. Face and ears normal. Conjunctivitis somewhat improving. No anæsthesia. Loss of phalanges stopped. Patient improving.

Patient No. 8 Tsat Shing, 28 years old; born in Man Jaw district. Manchurian descendant; single; an active soldier since his sixteenth year. Two years ago anæsthesia on legs and feet, with a few ulcers; skin without macula, but lustering; face shows high elevated separated nodula of dark-brown color with a fatty infiltration; expression of face leonin, ears swollen, enlargement of glands all over. Mucous membranes slightly inflamed, patient weak; had never lived in the leper village. Parents healthy. Treatment, thirty-five days.

Present conditions: Wounds on the legs healed up. Anæsthesia slowly disappearing; nodula on the face but little improvement yet. Less œdema of the ears and enlargement of glands much reduced. Patient's strength fairly good. Otherwise in good health.

Patient No. 9. Hing Ten, born thirty-seven years ago in Tungon; single. Two years ago, anæsthesia of the skin on both feet and legs. After one year, dry black spots all over the body. Face covered with copper-blue nodula, with some fatty infiltration; no swellings, patient weak. Parents healthy. Treatment, thirty-one days. Patient never lived in the leper village.

Present condition. Anæsthesia of the skin improving, nodula somewhat reduced, dry black macula on body slowly getting smaller and light. Patient improving slowly but surely. Otherwise in good health.

Patient No. 10. Lyounng Lieng, born twenty-eight years ago, Namboy; single. Eight years ago black dry anæsthesia spots all over the body; after two years nodula, dark blue, on face and ears, with œdema. Toes and fingers covered with ulcers and beginning to lose phalanges; atrophía of the toes; suppurating corns; pain in the muscles and bones; face expression leonin. Parents healthy. Treatment, twenty-eight days. Patient was not living in the leper village before, but is now there as are all the others.

Present condition: Ulcers and suppurating corns healed up; nodula and anæsthesia spots slowly diminishing. Loss of phalanges stopped; contraction of the hand still the same. Where nodula disappear, deep seated spots are left. Patient improving in health.

Patient No. 11. Li Ghee, 34 years of age, born in Sang Wai; single. After living ten years in Singapore red spots appeared on the face and body with swelling of face and ears. After staying in Singapore in the Java Hospital without any treatment in the course of three months all swelling went down, but spots appeared all over the body again. The spots are white, surrounded by red circles about the size of a dollar. Anæsthesia and lustering skin all over the body. Skin has a dark and dry appearance. Small ulcers on the feet. Mucous membranes inflamed. Parents clean. Treatment, thirty-eight days.

Present condition: Ulcers healed up, the white red spots getting dark; mucous membranes still inflamed. Patient very slow in improving.

Patient No. 12. Lao Yew, born thirty-one years ago in Canton. One year ago red spots appeared on left cheek, shortly after that feet and hands and all the body covered with high-elevated but also deep-seated nodula of red blue color. Condition of toes and fingers indicate development of *L. mutilans*; ears inflamed and swollen; mucous membranes somewhat excited. Parents clean. Treatment, three months. Discharged and entered as cook in the leper village.

Present condition: All nodula disappeared, but left distinctly signs where the nodula were; inflammation of mucous membranes gone; ears as well as toes and fingers normal. Patient able for hard work; in good health.

Patient No. 13. Kong Kiet, born forty-six years ago in Pung Yun; single. At the age of 27 years anæsthesia of skin on both feet and arms; red circular spots all over the body; suppurating corns on hands and feet; intensive rheumatic pain, and after ten years contraction of hands and toes muscular atrophy, paralytic walk. Most of his phalanges he lost while trying to walk. Spots changing now to dark, dry skin; patient very neglected and helpless. Parents died thirty years ago; were not lepers. He has lived in Leprotown for seventeen years.

Present condition: Wounds beginning to heal nicely. Other condition unchanged, as he came under treatment only eight days ago. Health somewhat improving.

Patient No. 14. Tzi Sieng, Kwong Sy Province, born twenty-five years ago. Eight months ago patient ate with three other fellows a kind of snake about 3 feet long and $1\frac{1}{2}$ inches thick. Two of them died in the course of one week; about the third man nothing is known what happened.

This kind of snake is regarded as a common meal in the interior of his province, and it is doubtful whether it was caused by the snake or something else. Very likely it seems that to catch the snake some poison was posted.

Soon after this headache and fever started, and in a few weeks on various parts of the body appeared deep flesh-penetrating sores. In such condition I received the patient. Abdomen, chest, face, and hands show 17 sores.

He is not leprous, but I took him as an extraordinary case. Treatment three weeks. Patient improving rapidly. Recovery in about two weeks.

The foregoing is respectfully submitted.

Respectfully,

ROBERT M. MCWADE,
United States Consul.

P. S.—Through Dr. Razlag's sickness and absence in Hongkong, this report was delayed awaiting his final corrections.

THE ASSISTANT SECRETARY OF STATE.

NOTE.—For previous notices of Dr. Razlag's work see PUBLIC HEALTH REPORTS for July 25, page 1743, and August 8, page 1839, for year 1902.

Report from Hongkong.

P. A. Surg. John McMullen reports, December 16, as follows: Week ended December 13, 1902. Nine vessels were inspected; 159 steerage passengers and 535 crew were bathed at the disinfecting station, and 821 pieces of baggage were disinfected. Two cases and 2 deaths (Chinese) from cholera were reported in the colony during the time covered by this report. For the same period there were 2 cases of enteric fever reported and 1 case of diphtheria—all European—with no deaths.

THE SURGEON-GENERAL.

CUBA.

Revocation of military order No. 159—Appointment of superior sanitary board.

[Translation—Department of Government—Decree No. 1.]

HAVANA, CUBA, *January 2, 1903.*

Assistant Surgeon Trotter reports the following:

"In virtue of the provisions of articles 1 and 3, first section of military order No. 159 (a), series of 1902, with the object of proceeding with the constitution of the superior sanitary board of the island of Cuba, and as proposed by the secretary of Government, I have to promulgate the following:

"Article 1. The nominations of the members of the superior sanitary board of the isle of Cuba, made under military order No. 179, of the date of March 18 last, being of a temporary character pending their approbation by the Government of the Republic, are hereby revoked.

"Art. 2. The following are appointed as active members of the superior sanitary board of the island of Cuba: Dr. Carlos J. Finlay, as chief of sanitation of the island; Dr. Joaquin L. Dueñas, as resident member in the city of Havana and in his capacity of president of the special commission of hygiene of the island of Cuba; Dr. Enrique B. Barnet, as resident member in the city of Havana, and Drs. Juan Guitéras and Ambrosio Grillo, representing the western and eastern parts of the

^a For military order No. 159, see PUBLIC HEALTH REPORTS for June 13, 1902, page 1381.